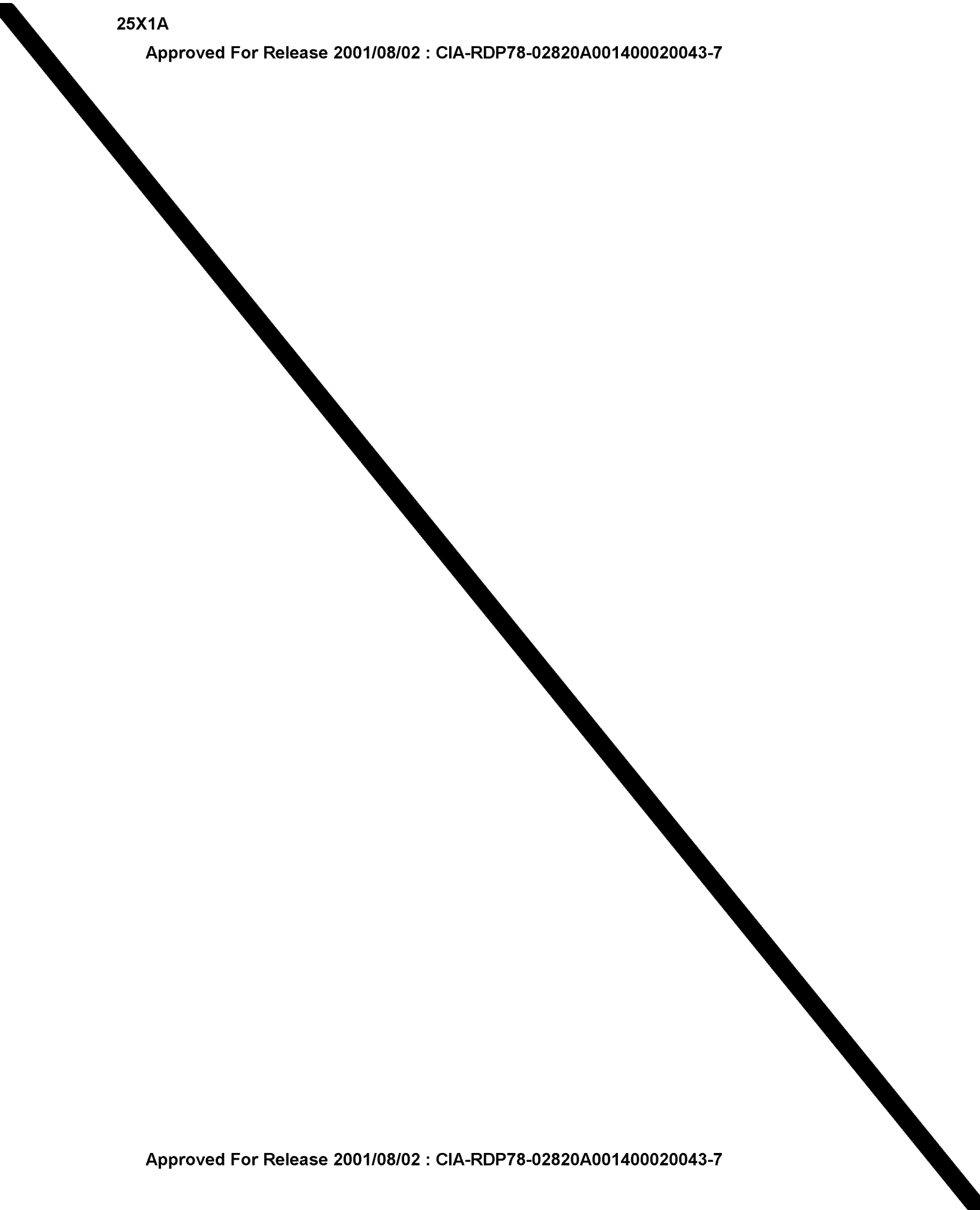

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EP 68-114

SUBJECT: Inspection Report No. 2 - AN/B-101 [redacted]

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7. Project Status:

A prototype version of the AN/B-101 antenna coupler and 15 foot whip antenna was demonstrated; it was driven by an RS-101 radio. Operation of the coupler is relatively simple. The radio is connected to the coupler's input connector and the antenna is connected to the coupler's output connector. A switch on the coupler is set to a position marked PRETUNE (50 ohm dummy load), the radio is actuated and then loads at the chosen crystal frequency into the 50 ohm load contained in the coupler. Next, the switch on the coupler is positioned to the appropriate frequency range desired (2-4 MHz, 4-8 MHz, 8-12 MHz, 12-24 MHz). Using a control marked TUNE, a meter on the coupler is then peaked for maximum power out into the whip antenna.

Electrically, the coupler works well between 2-12 MHz but between 14-24 MHz it exhibits mismatch conditions. Additional design adjustment of fixed component values for maximum performance is required. Mechanically the coupler is packaged into a rugged cast aluminum case measuring 6" x 7" x 4". Styling approximates that of the RS-101 radio. The antenna mounts are currently being constructed in the model shop, therefore, installation of the mount was described using the mechanical drawings. For aesthetic reasons, the coupler will be painted with the same textured paint used on the RS-101. The front panel knobs will also be identical to those on the production RS-101 radios. Most of the component parts and hardware for the fabrication of five AN/B-101 service test models are available.

[redacted]

25X1A9a

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